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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,033	07/12/2001	Hosagrahar Somashekhar	YOTTA1260	6139
44654	7590	07/15/2005	EXAMINER	
SPRINKLE IP LAW GROUP 1301 W. 25TH STREET SUITE 408 AUSTIN, TX 78705			ABELSON, RONALD B	
			ART UNIT	PAPER NUMBER
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DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No. 09/682,033	Applicant(s) SOMASHEKHAR ET AL.	
	Examiner Ronald Abelson	Art Unit 2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 May 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-7,9-12 and 14-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-7,10-12,14-18,23 and 26-33 is/are rejected.
- 7) ☒ Claim(s) 4,9,19-22,24 and 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Objections***

1. Claim 15 objected to because of the following informalities: Line 2 "input" should be changed to "output". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 recites the limitation "the second data stream" in line 2. There is insufficient antecedent basis for this limitation in the claim.

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***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 5, 6, 10-12, 14, 15, 23, and 26-33 rejected under 35 U.S.C. 103(a) as being unpatentable over McKnight (US 5,062,105) in view of Sherman (US 6,457,080).

Regarding claims 1, 10, 12, 30, McKnight teaches a system for transporting a plurality of low-bit-rate data signals (fig. 1 elements 11<sub>1-N</sub>, one or more incoming data rate signals, col. 2 lines 5-12) over a high-bit-rate line (fig. 1 see line between PMUX and PDEMUX, higher output data rate signal, col. 2 lines 5-12).

McKnight teaches a multiplexer configured to receive the plurality of low-bit-rate signals map a payload of each low-bit-rate input data signal to a payload of a high-bit-rate data signal (fig. 1 box 16, col. 2 lines 5-24), wherein the timing

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data (overhead bits col. 3 lines 47 - 51) is generated at the multiplexer based on the bit rates of the low bit-rate signals (nominal rate difference, col. 3 lines 47 - 53).

McKnight teaches a transmission medium coupled to the multiplexer and configured to transport the high-bit-rate data signal (fig. 1 element 19).

McKnight teaches a demultiplexer coupled to the transmission medium (fig. 1 box 23), wherein the demultiplexer is configured to extract the payload (fig. 1 box 26 see "d" output, col. 3 lines 21-23), overhead data (fig. 19, col. 3 lines 47-51: note the overhead bits are transmitted over medium 19 to the demultiplexer), and timing data (fig. 1 box 26 see "c" output, col. 3 lines 21-23) corresponding to each low-bit-rate input data signal from the high-bit-rate signal and to generate a plurality of low-bit-rate output data signals (fig. 1 elements 29<sub>1-N</sub>) which are substantially identical to the corresponding low-bit-rate input data signals (note in fig. 1 signals A, B, C are input and signals A, B, C are output).

Although McKnight teaches overhead, and timing data, the reference does not explicitly state the multiplexer maps overhead data of each low-bit-rate input data signal to unused overhead of the high-bit-rate data signal, and to map timing

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data for each low-bit-rate input data signal to the unused overhead of the high-bit-rate data signal.

Sherman teaches mapping the overhead of an input data of a low bit-rate-signal (fig. 2 STS-1 #n: 91) to unused overhead of a high-bit-rate data signal (fig. 2 STS-3 91, overhead information, col. 4 lines 22-24), and to map timing data of the low-bit-rate input data signal (fig. 2 STS-1 #n A1, A2, col. 4 lines 8-13) to the unused overhead of the high-bit-rate data signal (fig. 2 STS-3 A1, A2, col. 13-22).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of McKnight by transporting the payload, overhead, and timing data all within one frame (Sherman: see fig. 2 box STS-1 #n elements VT 1.5, 91, A1&A2 respectively) as shown by Sherman. This would improve the system since a single connection could be used. Note, McKnight has separate connections for the data and clock (fig. 1 elements d & c).

Regarding claims 2, 11, 23, constructing the plurality of output client data signals, which have bit sequences and timing substantially identical to the plurality of input cline data signals (McKnight: note in fig. 1 signals A, B, C are input and signals A, B, C are output).

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Regarding claim 5, transporting the server signal comprises transmitting the server signal over a high-bit-rate server span (McKnight: fig. 1 element 19).

Regarding claims 6, 28, and 32, the input client signals, output client data signals and server signal comprise Sonet signals (McKnight: col. 1 lines 17-20).

Regarding claim 14, the demultiplexer (McKnight: fig. 1 box 23) is configured to extract the payload for each low-bit-rate output data signal from the payload of the high-bit-rate data signal, high bit-rate-data signal (McKnight: fig. 1 box 26 see "d" output, col. 3 lines 21-23), to extract the timing data for each low-bit-rate output data signal from the overhead of the high-bit-rate data signal, high bit-rate-data signal (McKnight: fig. 1 box 26 see "c" output, col. 3 lines 21-23). Regarding the limitation to extract the overhead data for each low-bit-rate output data signal from the overhead of the high-bit-rate data signal, high bit-rate-data signal, note the overhead bits are transmitted over medium 19 to the demultiplexer (McKnight: fig. 1 element 19, col. 3 lines 47-51)

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Regarding claim 15, the demultiplexing unit (McKnight: fig. 1 box 23, 27, 28) comprises one or more egress modules (McKnight: fig. 1 box 27, 28) configured to generate each low-bit-rate output data signal (McKnight: fig. 1 elements 29 see d output signals) according to the corresponding timing data (fig. 1: outputs "d" are controlled by the PLL which has the clock "c" as the input, col. 3 lines 29-41).

Regarding claim 26, see limitations previously addressed in claim 30.

Regarding claims 27 and 31, the transmission medium comprises an optical network, wherein the multiplexer (fig. 1 box 228) is configured to generate the high-bit-rate data in an optical form, and wherein the demultiplexer is configured to receive the high-bit rate data signal in an optical form (McKnight: Sonet, col. 1 lines 17-20).

Regarding claim 29 and 33, the transmission medium comprises an electrical transmission network (McKnight: TDM signal, col. 2 lines 12-14). Note, TDM encompasses electrical transmission.



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6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of McKnight and Sherman as applied to claim 6 above, and further in view of de Boer (US 6,616,350).

Although the combination teaches Sonet, the combination is silent on the input client data signals and output client data signals comprise OC-48 Sonet signals and the server signal comprises an OC-192 Sonet signal.

de Boer teaches the input client data signals and output client data signals comprise OC-48 Sonet signals and the server signal comprises an OC-192 Sonet signal (fig. 1, col. 6 line 45 - col. 7 line 5).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination of McKnight and Sherman inputting OC-48 signals into the PMux (McKnight: fig. 1 box 16) for conversion into an OC-192 signal to be transported across the server signal (McKnight: fig. 1 line 19) and to be demodulated back into OC-48 by the PDemux (McKnight: fig. 1 box 23). Following the teachings of De Boer can perform this modification. This would improve the system by allowing the system to transport higher rate OC-192 signals.

***Response to Arguments***

7. Applicant's arguments with respect to amended independent claims 1, 10, 12, and 30 have been considered but are moot in view of the new ground(s) of rejection.

***Allowable Subject Matter***

8. Claims 4, 9, 19-22, 24 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 4, 9, nothing in the prior art of the record teaches or fairly suggests generating the client timing data by counting bits, in view of the teachings of the in combination of McKnight and Sherman.

Regarding claim 19, the multiplexer comprises one or more ingress modules configured to generate the timing data for each low-bit-rate input data signal. Note, the timing data "c" in McKnight is transmitted to the multiplexer of McKnight.

Regarding claims 24 and 25 nothing in the prior art of the record teaches or fairly suggests overhead data of the at least one of the low-bit-rate output data signals is **different** from overhead data of the corresponding one of the low-bit-rate input data signals, in view of the teachings of the in combination of McKnight and Sherman.

#### **Conclusion**

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,


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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (571) 272-3165. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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7/6/05